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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BAREFORD, KATHERINE A

ART UNIT PAPER NUMBER

1762

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/826,296

Applicant(s)

TOKIMASA ET AL.

Examiner

Katherine A. Bareford

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Claims 3 and 10 are canceled

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment of October 6, 2005 has been received and entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-2, 4-9 and 11-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As amended, independent claims 1, 11 and 12, provide "attaching both the first block and second block to a surface of the base with positions of the first and second lip land adjusted with respect to one another to form a slot therebetween with a step formed between the first lip land and the second lip land, thereby forming a die". However, claim 1 as originally written and the disclosure as originally filed provided that the slot is formed between a first block and second block that "are contacted to each other". This is not a requirement of claims 1, 11 and 12 as currently written, and therefore, the claims have been broadened from the scope of the originally filed

application and contain new matter. The Examiner suggests amending the paragraph to read “attaching both the first block and second block to a surface of the base and contacting the first and second blocks to each other with positions of the first and second lip land adjusted with respect to one another to form a slot therebetween with a step formed between the first lip land and the second lip land, thereby forming a die” to overcome the rejection.

The other dependent claims do not cure the defects of the claims from which they depend.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-2, 4-9 and 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1, 11 and 12 provide, “attaching both the first block and second block to a surface of the base with positions of the first and second lip land adjusted with respect to one another to form a slot therebetween with a step formed between the first lip land and the second lip land, thereby forming a die”. However, as worded, the claims further state that “the first and second blocks are assembled . . .” (twice in claim 12). However, no previous assembly step is referred to. The Examiner

suggests changing the "attaching. . ." step to read "assembling a die by attaching both the first block and second block to a surface of the base with positions of the first and second lip land adjusted with respect to one another to form a slot therebetween with a step formed between the first lip land and the second lip land, ~~thereby forming a die~~" to provide basis for the assembling, and to further change "the first and second blocks are assembled . . ." to "the first and second blocks are assembled to form the die . . .", to clarify what step is referred to.

In claim 1 and claim 12, last paragraph, "a temperature of said coating solution is t'" should be "a temperature of said coating solution is t'°C" to clarify that degrees C is used as at the last line of the claim.

The other dependent claims do not cure the defects of the claims from which they depend.

Double Patenting

6. The rejection of claims 1-2 and 13 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 and 4-7 of U.S. Patent No. 6,582,768 (hereinafter '768) in view of Japan 05-329432 (hereinafter '432) is withdrawn due to applicant's amendments to the claims of October 6, 2005.

7. The rejection of claims 3-9 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 and 4-7 of U.S. Patent No. 6,582,768 (hereinafter '768) in view of Japan 05-329432 (hereinafter '432) and Mandai et al (US 2001/0002281) (hereinafter Mandai '281) is withdrawn due to applicant's amendments to the claims of October 6, 2005.

Claim Rejections - 35 USC § 102

8. The rejection of claims 1-9 and 13 under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter is withdrawn due to applicant's amendments to the claims of October 6, 2005.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were

made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mandai et al (US 2002/0023584) (hereinafter Mandai '584) in view of Japan 2000-176343 (hereinafter '343).

Claims 1, 11 and 12: Mandai '584 teaches a method for applying a coating solution on a web. Figure 1 and paragraph [0010]. First and second blocks are provided and are loaded and attached on a surface of a base, a plate member is sandwiched between the blocks and surface of the base, positions of the first and second lip lands are adjusted, and then the blocks are integrally combined together. See figure 3 and paragraphs [0044] – [0045]. A slot is formed between the first block and the second block which are contacted to either other. Figure 2 and paragraphs [0030] and [0031]. The ends of the first and second blocks have first and second lip lands, respectively. Figures 2 and 4 and paragraphs [0030] and [0031]. The lands can both be flat and confronted to the web. Figure 1 and paragraph [0030]. A step is formed between the first lip land and the second lip land. Figure 4 and paragraph [0044]. The web is fed continuously. Figure 1 and paragraph [0010]. A coating solution is discharged from a slot of a die to said web. Figure 1 and paragraph [0010].

Claim 13: the height of each step can be measured with an optical microscope, a step measuring machine of the contact type or a laser displacement meter, after combining the first and second blocks. Paragraph [0032].

Mandai '584 teaches all the features of these claims except the temperatures at time of assembling.

However, '343 teaches a method for assembling a slide hopper coating apparatus or an extrusion die coating apparatus. Abstract and paragraphs [0001] and [0014]. '343 teaches to perform assembly where the temperature of the respective components of the coating apparatus are held at +/- 5 degrees C of the coating temperature (the temperature of the liquid to be coated). See the abstract and paragraphs [0031]-[0037] and paragraph [0014]. The temperature can be maintained by supplying warm water on the inside of the die components. Paragraphs [0031] – [0037]. This provides a uniformity of slit clearance precision when coating. Abstract.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mandai '584 to provide that the die blocks are assembled while heated to a temperature that is the same as the coating solution temperature as suggested by '343 in order to provide a uniformity of slot (slit) clearance, because Mandai '584 teaches a desirable positioning set up for coating a coating solution onto a running web using an extrusion die system, and '343 teaches that when coating with an extrusion die, it is desirable to provide that the die components are assembled while heated to a temperature that is the same as the coating solution temperature. '343

teaches that the heating of the die components can occur using warm water within ± 5 degrees C of the coating solution. It further would have been obvious that the heating can be performed by the ambient temperature around the die components and/or the use of a ribbon or other solid heater wound around the components with an expectation of desirable heating results, because '343 provides that the desire is that the components be at coating temperature during assembly, and various well known forms of heating such as heating the air around the die components and solid heaters contacting the die components would all be expected to provide such a heating.

12. Claim 2 and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mandai '584 in view of '343 as applied to claims 1 and 11-13 above, and further in view of Japan 05-329432 (hereinafter '432).

Mandai '584 in view of '343 teaches all the features of these claims except placement of the web such that a step formed between the two lip lands is such that the first lip land is nearer to the web than the second lip land (claim 2) and the distance between the fixing (claim 7). As to claims 4, Mandai '584 teaches that first and second blocks are loaded on a surface of a base, a plate member is sandwiched between the blocks and surface of the base, positions of the first and second lip lands are adjusted, and then the blocks are integrally combined together. See figure 3 and paragraphs [0044] – [0045]. As to claims 5-6 and 8, the backs of the blocks are fixed and pressed to the base with bolt-like fasteners. Figure 9 and paragraph [0045].

However, '432 teaches that when coating from a slot die with two lip lands, it is desirable to coat from a die with flat lands and with a step formed between the two lip lands such that the first lip land is nearer to the web than the second lip land (see the abstract, paragraph [0005] and figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mandai '584 in view of '343 to provide that a step is formed between the two lip lands such that the first lip land is nearer to the web than the second lip land as suggested by '432, in order to provide a desirable coating format, because Mandai '584 in view of '343 teaches forming a level difference between lands of a die formed from blocks when solution coating, and '432 teaches that when coating from a slot die with two lip lands, it is desirable to coat from a die with flat lands and with a step formed between the two lip lands such that the first lip land is nearer to the web than the second lip land. As to the distance between bolts, it is the Examiner's position that it would have been obvious to perform routine experimentation to optimize the positions of the bolts based on the width of the die to be formed, given that Mandai '584 teaches to use bolts extending across the width of the die.

13. Claims 1-2, 4 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomaru (US 5425967) in view of Japan 05-329432 (hereinafter '432) and Japan 2000-176343 (hereinafter '343).

Tomaru teaches a method for applying a coating solution on a web. Figure 1 and column 2, lines 35-55. First and second blocks are loaded on a surface of a base, a plate member is sandwiched between the blocks and surface of the base, positions of the first and second lip lands are adjusted, and then the blocks are integrally combined together. See figures 2 and 4 and column 4, lines 25-40. The slot is formed between a first block and a second block which are contacted to either other. Figures 2 and 4 and column 3, line 60 through column 4, line 10. The ends of the first and second blocks have first and second lip lands, respectively. Figures 1-4 and column 4, lines 1-10. The lands can both be confronted to the web. Figures 1-4. A step can be formed between the first lip land and the second lip land. Figure 3 and column 4, lines 30-40. The web is fed continuously. Figure 1 and column 2, lines 35-55. A coating solution is discharged from a slot of a die to said web. Figure 1 and column 2, lines 35-55.

Claim 4: First and second blocks are loaded on a surface of a base, a plate member is sandwiched between the blocks and surface of the base, positions of the first and second lip lands are adjusted, and then the blocks are integrally combined together. See figures 2 and 4 and column 4, lines 25-40.

Tomaru teaches all the features of these claims except (1) the flat lip lands, (2) placement of the web such that a step formed between the two lip lands is such that the first lip land is nearer to the web than the second lip land, and (3) the heating during assembly.

However, '432 teaches that when coating from a slot die with two lip lands, it is desirable to coat from a die with flat lands and with a step formed between the two lip lands such that the first lip land is nearer to the web than the second lip land (see the abstract, paragraph [0005] and figure 1).

'343 teaches a method for assembling a slide hopper coating apparatus or an extrusion die coating apparatus. Abstract and paragraphs [0001] and [0014]. '343 teaches to perform assembly where the temperature of the respective components of the coating apparatus are held at ± 5 degrees C of the coating temperature (the temperature of the liquid to be coated). See the abstract and paragraphs [0031]-[0037] and paragraph [0014]. The temperature can be maintained by supplying warm water on the inside of the die components. Paragraphs [0031] – [0037]. This provides a uniformity of slit clearance precision when coating. Abstract.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tomaru to provide flat lip lands and that a step is formed between the two lip lands such that the first lip land is nearer to the web than the second lip land as suggested by '432, in order to provide a desirable coating format, because Tomaru teaches forming a level difference between lands of a die formed from blocks when solution coating, and '432 teaches that when coating from a slot die with two lip lands, it is desirable to coat from a die with flat lands and with a step formed between the two lip lands such that the first lip land is nearer to the web than the second lip land. It would further have been obvious to modify Tomaru in view of '432

to provide that the die blocks are assembled while heated to a temperature that is the same as the coating solution temperature as suggested by '343 in order to provide a uniformity of slot (slit) clearance, because Tomaru in view of '432 teaches a desirable positioning set up for coating a coating solution onto a running web using an extrusion die system, and '343 teaches that when coating with an extrusion die, it is desirable to provide that the die components are assembled while heated to a temperature that is the same as the coating solution temperature. '343 teaches that the heating of the die components can occur using warm water within +/- 5 degrees C of the coating solution. It further would have been obvious that the heating can be performed by the ambient temperature around the die components and/or the use of a ribbon or other solid heater wound around the components with an expectation of desirable heating results, because '343 provides that the desire is that the components be at coating temperature during assembly, and various well known forms of heating such as heating the air around the die components and solid heaters contacting the die components would all be expected to provide such a heating.

14. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomaru in view of '432 and '343 as applied to claims 1-2, 4 and 11-12 above, and further in view of Mandai et al (US 2001/0002281) (hereinafter Mandai '281).

Tomaru in view of '432 and '343 teaches all the features of these claims except the fixing features (claims 5-6), the bolt positions (claim 7), and the pressing (claim 8).

However, Mandai '281 provides that when assembling a die formed from blocks with lip lands that can be adjusted relative to each other, it is desirable to load the blocks onto a base, with a plate member between the blocks and the base, to adjust the positioning and fix the base to the blocks with bolt type fasteners and combine the blocks integrally together with fasteners with provides fixing and pressing to the base (see figures 2 and 4, and paragraphs [0058], [0063], and [0064]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tomaru in view of '432 and '343 to use the die construction and combining features as taught by Mandai '281, in order to provide a desirable construction format, because Tomaru in view of '432 and '343 teaches forming a level difference between lands of a die formed from blocks when solution coating, and Mandai '281 teaches a desirable method of construction and combining of dies with level differences to be used for solution coating. As to the distance between bolts, it is the Examiner's position that it would have been obvious to perform routine experimentation to optimize the positions of the bolts based on the width of the die to be formed, given that Mandai '281 teaches to use bolts extending across the width of the die.

Allowable Subject Matter

15. The indication of allowable subject matter of claims 10-12 is withdrawn in view of the newly discovered reference(s) to Japan 2000-176343 and due to the new 35 USC 112 rejections as described above.

Response to Arguments

16. Applicant's arguments with respect to claims 1-2, 4-9 and 11-13 have been considered but are moot in view of the new ground(s) of rejection.

Please note the new 35 USC 112 rejections above and also the new rejections using Japan 2000-176343.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date


of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) with the First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


KATHERINE BAREFORD
PRIMARY EXAMINER